What is a **District Energy System?**

A district energy system provides energy for heating and cooling from a central plant to multiple users. In Nashville, steam and chilled water are produced at a central energy generation facility (EGF) and then distributed through an underground system of pipes to supply nearby connected buildings. District energy systems have become a critical component of the downtown infrastructures in many major metropolitan areas, including New York City, Washington, D.C., Chicago, Baltimore, San Francisco, Boston, Denver, Orlando and many others.

Why is Nashville getting a new DES?

Nashville's original district energy system, Thermal, was a waste-to-energy system, burning garbage to create energy that powered the system's boilers and chillers. When he took office, Mayor Bill Purcell commissioned a study of Metro's solid waste management system. This study included an independent evaluation of Thermal that found the cost of garbage disposal at Thermal too high and the plant's operations unreliable when using waste as its primary fuel. As a result, the Mayor recommended, and Metro Council approved, a new plan that called for phasing out Thermal, and replacing it with a new DES, fueled by natural gas and electricity.

While construction continues on the new facility, Thermal will continue to serve customers, using natural gas instead of solid waste as its primary fuel. This change allows Thermal to be a more reliable and efficient facility with capacity for additional customers. It will continue to operate until July 2004, when the new energy generation facility will come online. At that time, the Thermal facility will be demolished to make room for the long-awaited redevelopment of the riverfront property it presently occupies.

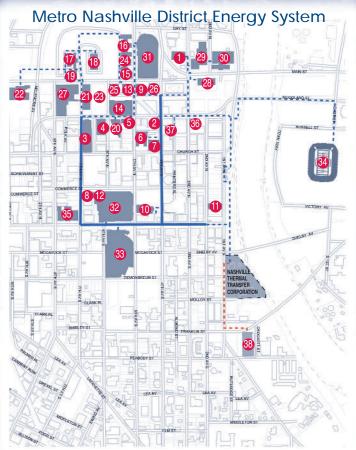
Metro Nashville District Energy System



For More Information, contact:

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http://www.nashville.gov/des/

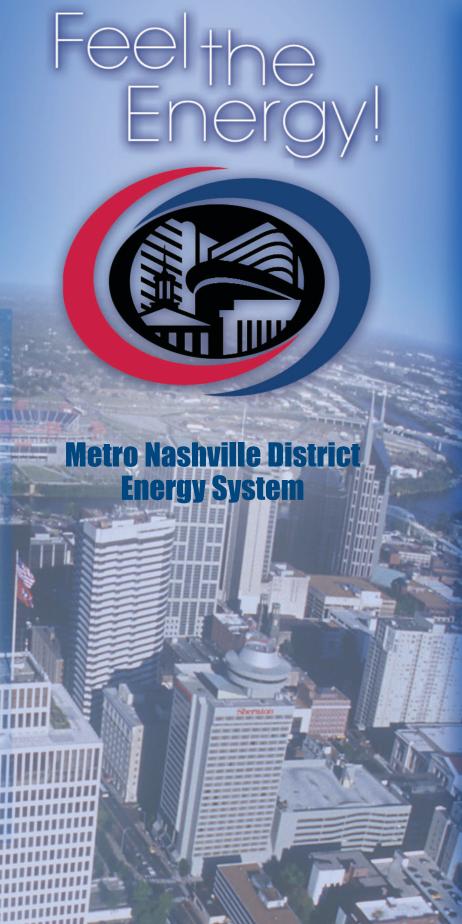


- Parkway Tower
- Union Planters
- Hermitage Hotel 501 Union Buildin
- SunTrust Financial Cente SunTrust Building
- Saint Mary's Church
- Ryman Auditorium
- Wildhorse Saloon 2 Renaissance Nashville
- 15 John Sevier State Office 16 Cordell Hull 17 Library and Archives 18 State Capitol

14 James K Polk

- 19 Supreme Court 20 Nashville City Cente 21 War Memorial
- 22 Tennessee State University 23 Legislative Plaza 24 Central Services
- 25 Rachel Jackson
- 27 Tennessee Tower 28 Metro Courthouse
- 29 Criminal Justice Cente 30 Ben West
- 31 Municipal Auditorium 32 Convention Center 33 Gaylord Entertainment Center
- 35 Hume-Fogg Academic Magnet

- 36 Stahlman Building 37 South Trust Plaza
- 38 New District Energy System



In the summer of 2004, construction will be completed on the new Metro Nashville District Energy System (DES) facility, and downtown Nashville will begin a new chapter in one of the city's most innovative and successful public/ private partnerships.

A new DES energy-generating facility will provide energy for heating and air conditioning to downtown buildings in an efficient, economical and environmentally friendly way. It will take the place of the Nashville Thermal Transfer Corporation (Thermal) system, the nation's first district energy system using solid waste as its primary fuel when it began operation

The new facility will not only serve current customers, but will have the ability to accommodate many more downtown buildings. If you are the owner or manager of a downtown building - or are considering that possibility - then consider becoming part of the DES network. The benefits can be dramatic, and the savings significant.

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What are the benefits for DES customers?

Savings on heating and cooling costs.

Energy rates for DES customers are set at 10% below the cost that would be incurred by a particular building using its own heating and cooling system. That savings is made possible by the DES' economies of scale in producing energy and purchasing fuel. That means that no matter how much fuel costs fluctuate through coming years, DES customers will experience a 10% savings over what their costs would have been to purchase, install, operate and maintain their own internal system.

Better use of space.

Without the need for on-site boilers and chillers, a building owner can add significantly to the property's useable square footage, creating revenue-generating space out of what would have been costly mechanical space.

Savings on up-front capital costs.

For new buildings that opt onto DES, the front-end savings are significant. The costs of designing, buying, permitting and installing new heating and air conditioning systems are saved. Instead, the building can simply connect to the energy distribution system piping and transfer the energy to the building's internal distribution means.

Savings on operating costs.

Once connected to the DES, the cost of maintaining the system – including mechanical repairs and labor – is a fraction of the cost of an internal stand-alone system.

Avoiding Risk

As a DES customer, building owners will be able to enjoy greater fuel price stability as a result of the bulk purchase of fuel. With the rate structure made possible by Metro, DES customers will also benefit from stable operating costs.

Easy transition from an HVAC system to DES.

When a building owner makes the decision to remove its aging self-heating and cooling equipment and convert to district energy, the most difficult part of the process is removing the old system and converting the space to useable square footage. DES will be responsible for installing the pipes that bring energy into the building. Then it's just a matter of connecting to them.

Other benefits.

- Remove source of indoor contamination
- No need for equipment permitting
- Increased energy supply reliability

Why is it good for Nashville?

Financial savings.

The new Metro Nashville DES is projected to save Nashville nearly \$67 million in its first 10 years of operation.

Lower electricity costs.

Reduces peak electric power demand when internal power for air conditioning is eliminated.

Cleaner environment.

Central plants employ stringent emission controls – more so than individual buildings – providing air quality benefits.

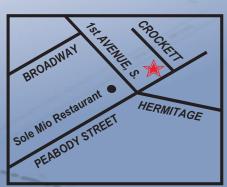
Greater fuel efficiency

A central plant is more efficient than many small plants, reducing overall energy consumption. Steam and chilled water supplies are 100% efficient "at the customer's door," compared with 80% or lower efficiencies when burning natural gas or fuel at individual buildings.

About the new DES facility...

Metro awarded Constellation Energy Source (CES) of Baltimore the contract to design, build, and maintain the \$43.6 million district energy facility and energy distribution system. CES has been involved in the development of many other district energy plants, including those in Chicago, Boston, New Orleans and

B a I t i m o r e . Following construction, CES will manage, operate and maintain the DES for 15 years, with options for three additional five-year extensions. The DES will be owned by Metro.



If you own a building or are considering purchasing property in downtown Nashville, you can learn more about the benefits all DES customers will receive by calling:

(800) 573-5801 or (704) 905-9630

Or you can go to: http://www.nashville.gov/des

